Name: _____ TP: _____

FORM A1

HW #55 Exponent Rules
Geometry
Due Date: Tuesday, January 7th, 2014

Failure to show work on all problems or use complete sentences will result in a LaSalle.
Watch the following video and answer the following questions
http://tinyurl.com/GEOMCP55 & http://tinyurl.com/GEOMCP55A

For all of the following rules do the following: 1) Describe the process and 2) Provide an example

I. PRODUCT RULE:
(ADD the exponents)

II. POWER RULE:
(MULTIPLY the exponents)

Complete the following problems:

1) $-x^4y^3z \bullet 4x^3z$

$-1 \cdot x^4 \cdot y^3 \cdot z \cdot 4 \cdot x^3 \cdot z$

$-1(4) = -4$

$x^4(x^3) = x^{4+3} = x^7$

$y^3 = y^3$

$z(z) = z^2$

$-4x^7y^3z^2$

2) $4g^3h \bullet 2g^8h^2$

3) $-12mn^2(-2m^3)$

4) $(-12hj)^2$

$(-12 \cdot h \cdot j)^2$

$(-12)^2$

h^2

j^2

$144h^2j^2$

5) $(-j^2k^4)^9$

6) *Review:* If a rectangle measures 42 meters by 56 meters, what is the length, in meters, of the diagonal of the rectangle?

7) What is the slope-intercept form of $-3x - y + 7 = 0$?

* $y = mx + b$

STAY READY.

Remember that you can always use old notes, a dictionary, math textbook, and/or look up topics online!

1) *In the p ast, you have used FOIL or box method to simplify the expression below.*

The expression $(6s - 2)(4s - 7)$ is equivalent to:

F. $24s^2 - 50s + 14$
G. $24s^2 - 34s - 14$
H. $24s^2 + 14$
J. $10s^2 - 50s + 14$
K. $10s^2 - 14$

	$6s$	-2
$4s$	$24s^2$	
-7		

2) * Set up the same as #1

$(4x - 5)(3x + 1)$ is equivalent to:

A. $7x - 4$
B. $12x^2 - 5$
C. $7x^2 + 11x - 4$
D. $12x^2 - 11x - 5$
E. $16x + 20$

Now do the opposite! Take the simplified expression and turn it into its factors (binomials)! If you forget how, use this video: **http://tinyurl.com/GEOMCP55B**

3) Factor the follow ing quadratic: $x^2 - 15x + 56$.

$(x - 7)(x - 8)$

$x \cdot x = x^2$

$-7 \cdot -8 = 56$ } The #s you choose here MUST work for BOTH!

$-7 + -8 = -15$ }

$x^2 - 7x - 8x + 56$

$x^2 - 15x + 56$ ✓

CHECK YOUR WORK:

	x	-7
x	x^2	$-7x$
-8	$-8x$	$+56$

* FOLLOW the color-coding! *

4) Little tougher: Now factor $2x^2 + x - 6$.

( )( )

$\_ \cdot \_ = 2x^2$

$\_ \cdot \_ = -6$ } #s MUST be the same

$\_ + \_ = \pm 1$ }

CHECK:

5) Little tougher still: Factor $3x^2 + 15x - 42$.

( )( )

$\_ \cdot \_ = 3x^2$

$\_ \cdot \_ = -42$ } #s MUST be the same

$\_ + \_ = 15$ }

CHECK:

STAY READY.

Name: _____ TP: _____

Form A

HW#56: Exponent Rules Day 2
Geometry
Due Date: Wednesday, January 8th, 2014

Failure to show work on all problems or use complete sentences will result in a LaSalle.

Watch the following videos and answer the following questions
http://tinyurl.com/GEOMCP55 & http://tinyurl.com/GEOMCP55A

I. QUOTIENT RULE:
(SUBTRACT EXPONENTS)

III. NEGATIVE EXPONENT RULE:
(Negative exponent x^{-5}... take the reciprocal: $\frac{1}{x^5}$)

FOLLOW/WORK THROUGH THE EXAMPLES TO HELP YOU

1) $\frac{2g^3h^8}{12h^4}$

$\frac{2 \cdot g^3 \cdot h^8}{12 \cdot h^4}$ $\frac{h^8}{h^4} = h^{8-4} = h^4$

$\frac{1 \cdot g^3 \cdot h^4}{6}$*

$\frac{g^3h^4}{6}$

2) $\frac{3x^{-4}y^4}{-3xy}$

$\frac{3 \cdot x^{-4} \cdot y^4}{-3 \cdot x^1 \cdot y}$

$-\frac{1}{1 \cdot x^1 \cdot x^4} \cdot \frac{y^4}{y^1}$ y^{4-1} x^{1+4}

$-\frac{y^3}{x^5}$

*EXPONENT stays where the greatest exponent is. (h^8 is greater than h^4)

3) Which is equivalent to $\frac{x^4y^2x}{y^3x^2}$?

A. $x^2y^{\frac{2}{3}}$
B. $x^{\frac{5}{2}}y^{\frac{2}{3}}$
C. x^3y
D. $\frac{x^3}{y}$
E. $\frac{1}{x^3y}$

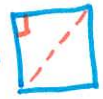
4) $\left(\frac{4^{-2}x^3}{y^{-4}}\right)$

5) For all x, $\frac{-5(-2x)^3}{10x}$ is equivalent to:

A. $100x^2$
B. $4x^2$
C. x^3
D. $-4x^2$
E. $-100x^2$

6) *Review:* The length of one side of a square is 11 units. What is the length, in units, of the diagonal of the square?

F. $22\sqrt{2}$
G. $\sqrt{22}$
H. $11\sqrt{3}$
J. $11\sqrt{2}$
K. 11



Sides of squares are all the _____.

How do you find the hypotenuse?

STAY READY.

You should approach each problem as an exploration. Problem-solving requires persistence as much as it requires ingenuity. When you get stuck, or solve a problem incorrectly, back up and start over. Keep in mind that you're probably not the only one who is stuck, and that may even include your teacher. **If you have taken the time to think about a problem, you should bring to class a written record of your efforts, not just a blank space in your notebook.** The methods that you use to solve a problem, the corrections that you make in your approach, the means by which you test the validity of your solutions, and your ability to communicate ideas are just as important as getting the correct answer.

Solve all of the problems in your ***graph paper notebook neatly labeled!*** If you are stuck and cannot answer a question, write at least three complete sentences about the problem and what you do know. Use at least one of the sentence starters below:

a. Even though I am stuck, I do know...and I think I should...because...
b. I am stuck because I do not know what ____ means. I think it means...so I tried...
c. I got this answer but I think it is wrong because...

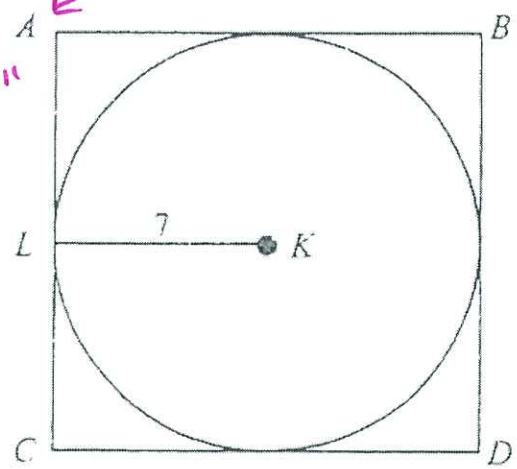
Remember that you can always use old notes, a dictionary, math textbook, and/or look up topics online!

1) Salt is important in several superstitions including the one that says you should sprinkle salt on your doorstep to keep out evil spirits. The United States sold 25.03 million tons of salt in 2008, a decrease of 8.07 million tons from 1996. How many tons of salt did the United States sell in 1996?

2)

. In the figure below, the circle centered at K is contained within the square $ABCD$. The length of $\overline{KL}$ is 7 inches. If the circle is cut out of the square, how much of the area, in square inches, of the square, will remain?

What operation is "cut out of"



what operation? "cut out of"

Area square □ Area circle

s^2 □ ——— $r=$ □

F. $196 - 49\pi$
G. $196 - 14\pi$
H. 14π
J. 49π
K. $196 + 14\pi$

STAY READY.

Name: _____ TP: _____

Form A

HW#57: **FINAL REVIEW!**
Geometry
Due Date: Monday, January 13th, 2014

1) Define the following in three separate complete sentences: a) point, b) line, c) plane

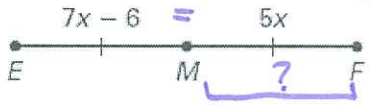
_____

_____

_____

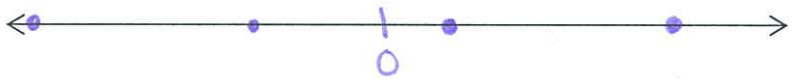
2) Find KM.

3) Find MF. * congruent means EQUAL



Use the description of a number line below to answer questions 4 – 5.
On a number line, point W is located at 3, X is located at –5, Y is located at –16, and Z is located at 11.

* Complete diagram



4) What is the distance, in coordinate units, between points W and Z?

$|W-Z|$

5) What is the distance, in coordinate units, between points W and Z?

X Y

6) Write the midpoint formula:

7) Write the distance formula:

8) Find the coordinates of the midpoint of the segment with the given endpoints.

a. R(3, 1) and S(3, 7)

$x_1\ y_1$ $x_2\ y_2$

b. V(2, 4) and W(6, 6)

$x_1\ y_1$ $x_2\ y_2$

9) Find the distance of the segments with the given endpoints. Leave your answers ~~in reduced radical form.~~ rounded to nearest tenth.

a. A(-6, 4) and B(0, 7)

$x_1\ y_1$ $x_2\ y_2$

b. X(-1, 8) and Y(6, 1)

STAY READY.

10) Find the values of x that satisfy the following equation: $2|2x-3|+6=12$

$-6 \quad -6$

$\frac{2|2x-3|}{2} = \frac{6}{2}$

$|2x-3| = 3$

$2x-3=3$ $\quad$ $2x-3=-3$

COMPLETE

11) Find the solution set of $2|6m+5|-1=25$

Use #10 example to help

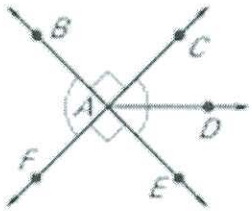
a. Find the distance between the two values for m.

|solution 1 − solution 2| = ☐

b. Find the sum of the two values for m.

(+)

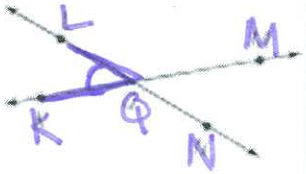
12) Name the acute angles in the given figure:



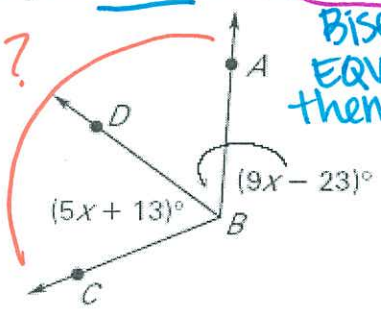
Acute: Angle less than 90°.

13) Which of the following is vertical to $\angle LQK$? Vertical: OPPOSITE!

a) $\angle LQM$
b) $\angle MQN$
c) $\angle NQK$
d) $\angle QMN$

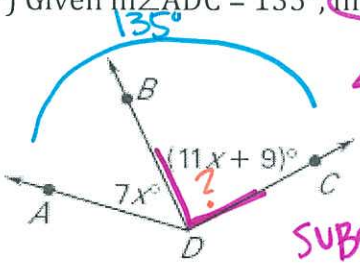


16) BD bisects ∠ABC. Find m∠ABC.



Bisects: splits into two EQUAL angles. Set them ____ to each other.

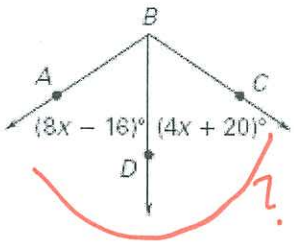
17) Given m∠ADC = 135°, find m∠BDC.



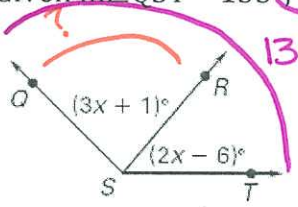
∠BDC + ∠ADB = ∠ADC

↓ SUBSTITUTE & SOLVE.

18) BD bisects ∠ABC. Find m∠ABC.

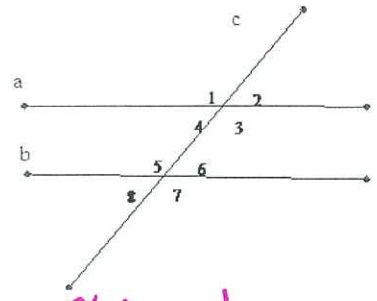


19) Given m∠QST = 135°, find m∠QSR.



STAY READY.

20) List all the pairs of congruent angles if lines a and b are cut by transversal c.



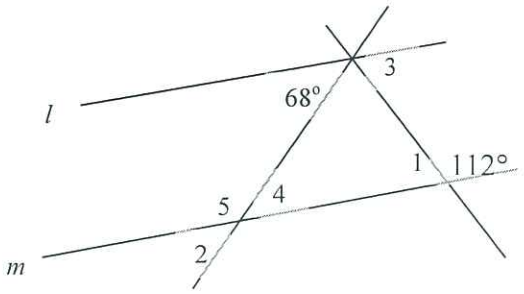
≅ ∠s:
- Vertical
- Alternate Interior
- Alternate Exterior
- Corresponding

∠s ≅ to ∠1 | ∠s ≅ to ∠2

1)
2)
3)

1)
2)
3)

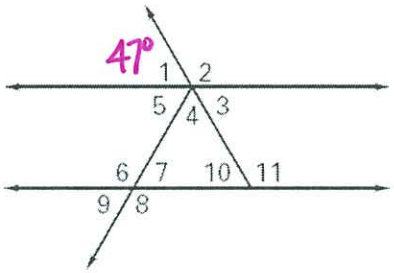
21) In the figure below, lines l and m are parallel. Which of the following angles does not have a measure of 68 degrees? *Write in all missing angles into the diagram.*



A. ∠1
B. ∠2
C. ∠3
D. ∠4
E. ∠5

WHY?

22) In the figure below lines a and b are parallel, and m∠1 = 47 °. Find the measure of ∠11.



a. 43°
b. 47°
c. 133°
d. 313°
e. Cannot be concluded from given information

① Find ∠3: ____
↳ What relationship?
② Find ∠11 from ∠3: ____
↳ What relationship?
____

23) Which statement is true of the given lines?

① Slope-intercept form
② Identify slope: # in front of "x"
③ Slopes are parallel if they are the same. Slopes are perpendicular if opposite reciprocals.

Line A: $-3x + y = 5$ +3x
+3x
$y = 3x + 5$ / SLOPE = 3

Line B: $x + 3y = 2$

Line C: $2x + 3y = 5$

A) Lines a and b are parallel
B) Lines a and b are perpendicular
C) Lines a and c are parallel
D) Lines a and c are perpendicular
E) Lines b and c are perpendicular

STAY READY.

REMINDERS

① ALWAYS write in slope-intercept form: $y = mx + b$

② m = slope

③ b = y-intercept

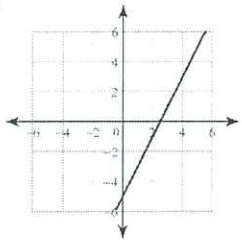
$y = 2x + 5$ → y-intercept

slope ... $\frac{2}{1}$ $\frac{\text{Rise}}{\text{Run}}$

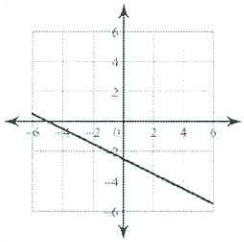
24) Which graph represents the equation given?

$y = 2x + 5$

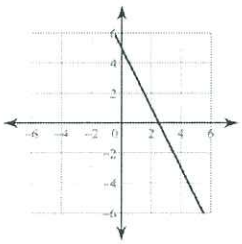
A)



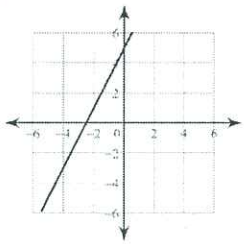
B)



C)



D)



25) Write the slope equation (from two points).

26) What is the slope of the line that passes through the points (4, 5) and (-3, 0)?

x_1 y_1 x_2 y_2

27) What is the equation of the line that passes through the points (-2, -1) and (3, 6)?

$\frac{6-(-1)}{3-(-2)} = \frac{7}{5} = m$ (x_1, y_1, x_2, y_2)

$y = mx + b$

$-1 = \frac{7}{5}(-2) + b$

$-1 = -2.8 + b$

$1.8 = b$

$y = mx + b$

$y = \_\_ x + \_\_$

28) What is the equation of the line that passes through the points (0, -4) and (-2, 1)?

*use #27 to help you solve #28! *

29) What is the equation of the line that is parallel to y = 2x + 4 and passes through the point (0, -1)?

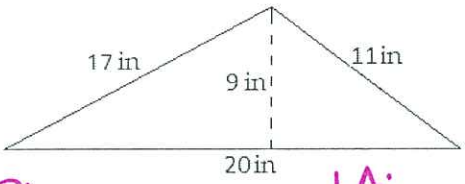
* same as #27. Parallel slopes are the SAME. Therefore, "m" is the # in front of "x."

30) Fill in the following formulas. * LOOK IN YOUR NOTEBOOKS AFTER you try to fill this in from memory *

	Perimeter	Area
Triangle	$P = s_1 + s_2 + s_3$	
Square (only use "s")		
Rectangle		
Circle		

STAY READY.

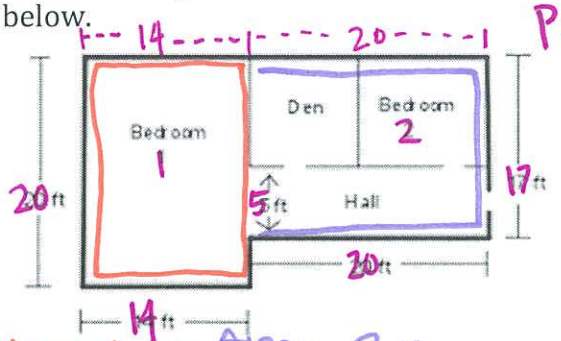
31) Find the perimeter and area of the triangle below.



P:

A:

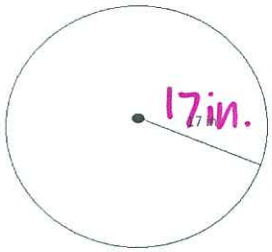
32) Find the perimeter and area of the floor plan below.



P:

Area 1 + Area 2 =

33) What is the circumference of the circle?



34) What is the length of the radius of a circle with an area of $196\pi\ cm^2$?

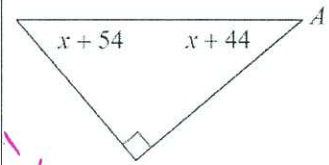
$A = \pi r^2$

* Plug in what you know & solve!

35) What the sum of the interior angles of a triangle?

36) What is the sum of the interior angles of a quadrilateral?

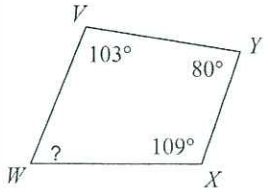
37) Find the measure of angle A.



Use this info. here!

38) What is the measure of angle W in the figure below?

Use this info. here



STAY READY.